

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction, (410-313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (Section G) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site Area Disturbed .52 Acres .09 Acres Area to be roofed or paved Area to be vegetatively stabilized .43 Acres 287 Cu. Yds. Offsite Waste/Borrow Area Location Williams Knoll

- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day,

HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously

- SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:
- 1) PREFERRED -- Apply 2 tons per acres dolomitic limestone (92 lbs/1000sq. ft.) and 660 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000sq. ft.) 2) ACCEPTABLE -- Apply 2 tons per acres dolomitic limestone (92 lbs/1000sq.

ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000

sq. ft.) before seeding. Harrow or disk into upper three

acre Kentucky 31 Tail Fescue and mulch 2 tons / acre well anchored

- SEEDING --- For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000sg, ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - Seed with 60 lbs. per
- MULCHING --- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/
- 1000sq. ft.) for anchoring. MAINTENANCE --- Inspect all seeding areas and make needed repairs, replacements

and reseedings. TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

SEEDBED PREPARATION: -- Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously

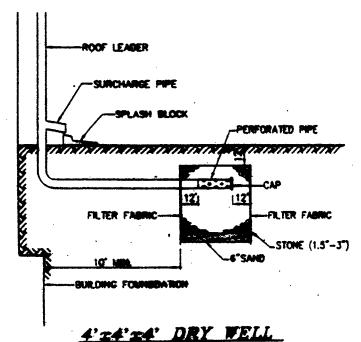
SOIL AMENDMENTS -- Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq.

SEEDING: — For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or

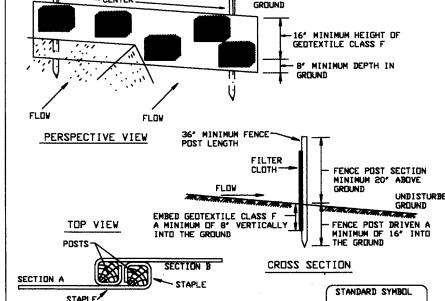
MULCHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchorina.

SEDIMENT CONTROL for additional rates and methods not covered.

APPROVED: DEPARTMENT OF PLANNING AND ZONING



DETAIL 22 - SILT FENCE



Construction Specifications . Fence posts shall be a minimum of 36' long driven 16' minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be

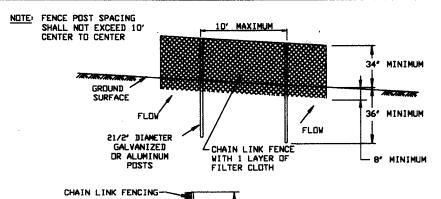
JOINING TWO ADJACENT SILT

Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements 50 lbs/in (min.) Tensile Modulus 20 lbs/in (min.) Test: MSMT 509 0.3 gal ft / minute (max.) Test: MSMT 322 Filtering Efficiency 75% (min.)

_____SF _____

. Where ends of geotextile fabric come together, they shall be overlapped folded and stapled to prevent sediment bypass 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height. MARYLAND DEPARTMENT OF ENVIRONMEN U.S. DEPARTMENT OF AGRICULTURE

SUIL CONSERVATION SERVICE E - 15 - 3 VATER MANAGEMENT ADMINISTRATION DETAIL 33 - SUPER SILT FENCE



FILTER CLOTH-EMBED FILTER CLOTH 8 STANDARD SYMBOL Construction Specifications

1. Fencing shall be 42' in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length Chain link fence shall be fastened securely to the fence posts with wire ties.

the lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced

every 24° at the top and mid section. 4. Filter cloth shall be embedded a minimum of 8° into the ground. 5. When two sections of filter cloth adjoin each other, they shall be overlapped

6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or

staples at top and mid section and shall meet the following requirements for Test: MSMT 509 Test: MSMT 509 Tensile Strength 50 lbs/in (min.) Tensile Modulus 20 lbs/in (min.) 0.3 gal/ft*/minute (max.) Test: MSMT 322 Flow Rate Test: MSMT 322

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent

To provide a suitable soil medium for vegetative growth. Soils of concern have

Conditions Where Practice Applies

This practice is limited to areas having 2:1 or flatter slopes where:

b. The soil material is so shallow that the rooting zone is not deep

c. The original soil to be vegetated contains material toxic to plant

growth.
d.The soil is so acidic that treatment with limestone is not feasible.

For the purpose of these Standards and Specifications, areas having

Construction and Material Specifications

slopes steeper than 2:1 require special consideration and design for

adequate stabilization. Areas having slopes steeper than 2:1 shall

Topsoil salvaged from the existing site may be used provided that it

the depth of topsoil to be salvaged for a given soil type can be found

in the representative soil profile section in the Soil Survey published

by USDA-SCS in cooperation with Maryland Agricultural Experimental

Topsoil Specifications - Soil to be used as topsoil must meet the

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy

agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting

textured subsoils and shall contain less than 5% by volume of cinders.

ii. Topsoil must be free of plants or plant parts such as bermuda grass,

(200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked

stones, slag, coarse fragments, gravel, sticks, roots, trash, or other

quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as

clays, ground limestone shall be spread at the rate of 4-8 tons/acre

into the soil in conjunction with tillage operations as described in the

Place topsoil (if required) and apply soil amendments as specified

in 20.0 Vegetative Stabilization — Section 1 — Vegetative Stabilization

dictating fertilizer and lime amendments required to bring the soil into

b. Organic content of topsoil shall be not less than 1.5

a. pH for topsoil shall be between 6.0 and 7.5. If the tested

soil demonstrates a pH of less than 6.0, sufficient lime shall

c. Topsoil having soluble salt content greater than 500 parts

d. No sod or seed shall be placed on soil which has been

until sufficient time has elapsed (14 days min.) to permit

Note: Topsoil substitutes or amendments, as recommended by a qualified

Place topsoil (if required) and apply soil amendments as specified

in 20.0 Vegetative Stabilization — Section 1 — Vegetative Stabilization

When top soiling, maintain needed erosion and sediment control

ii. Grades on the areas to be top soiled, which have been previously

established, shall be maintained, albeit 4"-8" higher in elevation. iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and

lightly compacted to a minimum thickness of 4". Spreading shall be

minimum of additional soil preparation and tillage. Any irregularities

in the surface resulting from top soiling or other operations shall be corrected in order to prevent the formation of depressions or water

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a

Alternative for Permanent Seeding — instead of applying the full amounts

of lime and commercial fertilizer, composted sludge and amendments may

conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a

person or persons that are permitted (at the time of acquisition

b. Composted sludge shall contain at least 1 percent nitrogen,

1.5 percent phosphorus, and 0.2 percent potassium and have a Ph

of 7.0 to 8.0. If compost does not meet these requirements, the

appropriate constituents must be added to meet the requirements

c. Composted sludge shall be applied at the rate of 1 ton/ 1,000

of the compost) by the Maryland Department of Environment under COMAR 26.04.06.

condition that may otherwise be detrimental to proper grading and

i. Composted Sludge Material for use as a soil conditioner for sites

ii. Composted sludge shall be amended with a potassium fertilizer

References: Guideline Specifications, Soil Preparation and Sodding. MD VA, Pub.

#1, Cooperative Extension Service, University of Maryland and Virginia

applied at the rate of 4 lb./ 1,000 square feet, and 1/3 the normal lime

having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall

performed in such a manner that sodding or seeding can proceed with a

practices such as diversions, Grade Stabilization Structures, Earth

Dikes. Slope Silt Fence and Sediment Traps and Basins.

agronomist or soil scientist and approved by the appropriate approval

treated with soil sterilants or chemicals used for weed control

i. On soil meeting Topsoil specifications, obtain test results

be prescribed to raise the pH to 6.5 or higher.

iii. Where the subsoil is either highly acidic or composed of heavy

materials larger than 11/2" in diameter.

III. For sites having disturbed areas under 5 acres:

IV. For sites having disturbed areas over 5 acres:

following procedures.

Methods and Materials.

Methods and Materials.

seedbed preparation

application rate.

olytechnic Institutes. Revised 1973.

be applied as specified below:

V. Topsoil Application

compliance with the following:

percent by weight.

per million shall not be used.

dissipation of phyto-toxic materials.

authority, may be used in lieu of natural topsoil.

clay loam, loamy sand. Other soils may be used if recommended by an

meets the standards as set forth in these specifications. Typically,

have the appropriate stabilization shown on the plans.

a. The texture of the exposed subsoil/parent material is not adequate to

enough to support the plants or furnish continuing supplies of moisture and

low moisture content, low nutrient levels, low pH, materials toxic to plants,

vegetation.

and/or unacceptable soil gradation.

produce vegetative growth.

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I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE AC-CORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DE-PARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY

3.4.6 Construction Specifications

3.4.6.1 Timing

A dry well shall not be constructed or placed in service until all of the contributing drainage area has been stabilized and approved by the responsible

3.4.6.2 Dry Well Preparation

Excavate the dry well to the design dimensions. Excavated materials shall be placed away from the excavated sides to enhance wall stability. Large tree roots shall be trimmed flush with the sides in order to prevent fabric puncturing or tearing during subsequent installation procedures. The side walls of the dry well shall be roughened where sheared and sealed by heavy equipment.

3.4.6.3 Fabric Laydown

The filter fabric roll shall be cut to the proper width prior to installation. The cut width must include sufficient material to conform to well perimeter irregularities and for a 6-inch minimum top overlap. Place the fabric roll over the well and unroll a sufficient length to allow placement of the fabric down into the well. Stones of other anchoring objects should be placed on the fabric at the edge of the well to keep the lined well open during windy periods. When overlaps are required between rolls, the upstream roll shall lap a minimum of 2 feet over the downstream roll in order to provide a shingle effect. The downstream roll in order to provide a shingled effect. The overlap ensures fabric continuity or the fabric conforms to the excavation surface during aggregate placement and compaction.

3.4.6.4 Aggregate Placement and Compaction

Drainage aggregate shall be placed in lifts and compacted using plate compactors. As a rule of thumb, a maximum loose lift thickness of 12 inches is recommended. The compaction process ensures fabric conformity to the excavation sides, thereby reducing the potential for soil piping and fabric clogging.

3.4.6.5 Overlapping and Covering

Following aggregate placement, the fabric previously weighted by stones should be folded over the aggregate to form a 6" minimum longitudinal lap. The desired fill soil should be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling.

3.4.6.6 Contamination

Care shall be exercised to prevent natural or fill soils from intermixing with the drainage aggregate. All contaminated aggregate shall be removed and replaced with uncontaminated aggregate.

3.4.6.7 Voids Behind Fabric

Voids can be created between the fabric and excavation sides and should be avoided. Removing boulders or other obstacles from the trench walls is one source of such voids. Natural soils should be placed in these voids at the most convenient time during construction to ensure fabric comformity to the excavation sides. Soil piping, fabric clogging, and possible surface subsidence will be avoided by this remedial process.

3.4.6.8 <u>Unstable Excavation Sides</u>

Vertically excavated trench walls may be difficult to maintain in areas where moisture is high or where soft cohesive or cohesionless soils predominate. These conditions may require laying back of the side slopes to maintain stability; trapezoidal rather than rectangular cross sections may result.

3.4.6.9 Foundation Protection

Dry wells 3 or more feet deep shall be located at least 10 feet down gradient from foundation walls.

3.4.6.10 Observation Well

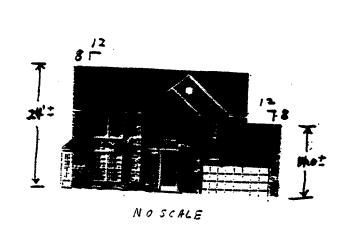
An observation well, as described in subsection 3.4.4.8 and Figure 3-5, will be provided. The depth of the well, at the time of installation, will be clearly marked on the well cap.

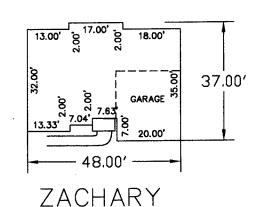
3.4.7 Maintenance

Dry wells shall be designed to minimize maintenance. However, it is recognized that all infiltration facilities are subject to clogging by sediment, oil, grease, grit and other debris. In addition, the performance and longevity of these structures is not well documented. Consequently a monitoring observation well is required for all infiltration structures.

The observation well should be monitored periodically. For the first year after completion of construction, the well should be monitored on a quarterly basis and after every large storm. It is recommended that a log book be maintained indicating the rate at which the facility dewaters after large storms and the depth of the well for each observation. Once the performance characteristics of the structure have been verified, the monitoring schedule can be reduced to an annual basis, unless the performance data indicate tha a more frequent schedule is required.

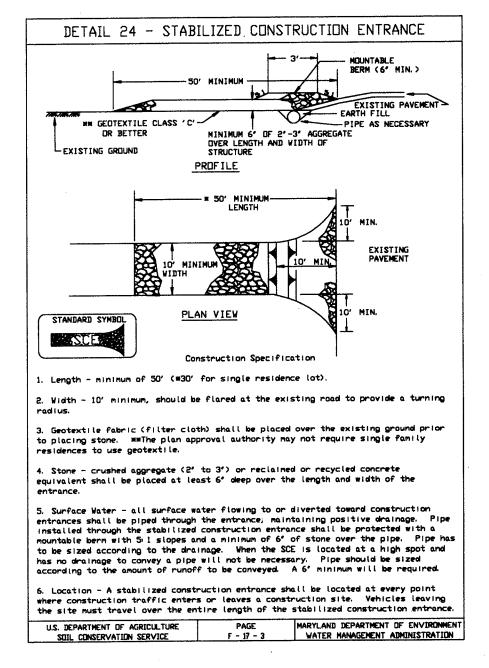
____ ----- 50.00' ---BIRCHWOOD







SCALE: 1" = 30'



OWNER: IRENE L. ROBERTS 6357 OLD WASHINGTON ROAD ELKRIDGE, MARYLAND 21227

ENGINEER: JOHN L. SCHNEIDER, P.E. 100 N. ROLLING ROAD CATONSVILLE, MD 21228 (410) 744-1945

SITE DEVELOPMENT PLAN ROBERTS PROPERTY

LOTS 2 & 3

NEW SINGLE FAMILY UNITS TAX MAP 38, GRID 8, PARCEL

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

> FEBRUARY, 1999 Scale: 1'' = 30'

SHEET 2 OF 2

